

**What is claimed is:**

1. A method for modulating metabolism of maxillary sinus pathogenic bacteria comprising the step of contacting maxillary sinus pathogenic bacteria with an antibacterially effective amount of a composition comprising a gemifloxacin compound, or antibacterially effective derivatives thereof.
2. The method of claim 1 wherein said maxillary sinus pathogenic bacteria is selected from the group consisting of:
  - a bacterial strain isolated from acute or chronic maxillary sinusitis; and
  - a maxillary sinus isolate of *S. aureus*, *S. pneumoniae*, *Haemophilus* spp., *M. catarrhalis*, and anaerobic strain or non-fermentative Gram negative bacilli, *Neisseria meningitidis* and  $\beta$ -haemolytic *Streptococcus*.
3. A method of treating or preventing a bacterial infection by maxillary sinus pathogenic bacteria comprising the step of administering an antibacterially effective amount of a composition comprising a gemifloxacin compound to a mammal suspected of having or being at risk of having an infection with maxillary sinus pathogenic bacteria.
4. The method of claim 3 wherein said maxillary sinus pathogenic bacteria is selected from the group consisting of:
  - a bacterial strain isolated from acute or chronic maxillary sinusitis; and
  - a maxillary sinus isolate of *S. aureus*, *S. pneumoniae*, *Haemophilus* spp., *M. catarrhalis*, and anaerobic strain or non-fermentative Gram negative bacilli, *Neisseria meningitidis* and  $\beta$ -haemolytic *Streptococcus*.
5. The method of claim 1 wherein said modulating metabolism is inhibiting growth of said bacteria.
6. The method of claim 1 wherein said modulating metabolism is killing said bacteria.
7. The method of claim 1 wherein said contacting said bacteria comprises the further step of introducing said composition into a mammal.
8. The method of claim 3 wherein said mammal is a human.
9. The method of claim 7 wherein said mammal is a human.
10. The method of claim 1 wherein said bacteria is selected from the group consisting of: a bacterial strain isolated from acute or chronic maxillary sinusitis; a maxillary sinus isolate of *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus* spp., *Moraxella catarrhalis*, an anaerobic strain or non-fermentative Gram negative bacilli,

*Neisseria meningitidis*,  $\beta$ -haemolytic *Streptococcus*, *Haemophilus influenzae*, an *Enterobacteriaceae*, a non-fermentative Gram negative bacilli, *Streptococcus pneumoniae*, *Streptococcus pyogenes*, a methicillin-resistant *Staphylococcus* spp., *Legionella pneumophila*, *Mycoplasma* spp. and *Chlamydia* spp., *Haemophilus influenzae*,  
5 *Haemophilus parainfluenzae*, *Peptostreptococcus*, *Bacteroides* spp., and *Bacteroides urealyticus*.

11. The method of claim 1 wherein said bacteria is selected from the group consisting of: a bacterial strain isolated from acute or chronic maxillary sinusitis; a maxillary sinus isolate of *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus*  
10 spp., *Moraxella catarrhalis*, an anaerobic strain or non-fermentative Gram negative bacilli, *Neisseria meningitidis*,  $\beta$ -haemolytic *Streptococcus*, *Haemophilus influenzae*, an *Enterobacteriaceae*, a non-fermentative Gram negative bacilli, *Streptococcus pneumoniae*, *Streptococcus pyogenes*, a methicillin-resistant *Staphylococcus* spp., *Legionella pneumophila*, *Mycoplasma* spp. and *Chlamydia* spp., *Haemophilus influenzae*,  
15 *Haemophilus parainfluenzae*, *Peptostreptococcus*, *Bacteroides* spp., and *Bacteroides urealyticus*.